Writing Broadening Participation in Computing (BPC) Plans

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Motivation for the BPC Initiative

"It will take more than good intentions or business as usual, however, to reverse longstanding underrepresentation. **It will take committed, focused, and sustained efforts on the part of many in the computing community.**"

"CISE will address BP programmatically both through focused activities and through **the inclusion of BPC efforts as an *accepted* and *expected* part of its research and education award portfolios.**"

Timeline of the BPC Initiative

- **Fiscal Year 2017:** NSF 17-110, _Dear Colleague Letter: Pursuing Meaningful Actions in Support of BPC_, announced

- **Fiscal Year 2018:** BPC Project plans _encouraged_ for Expeditions in Computing, Cyber-Physical Systems, and Secure & Trustworthy Cyberspace Frontier submissions

- **Fiscal Year 2019-2021:** BPC Project plans _required by time of award_ in Medium and Large proposals submitted to core programs, CPS, and SaTC. _Departmental BPC Plans encouraged_

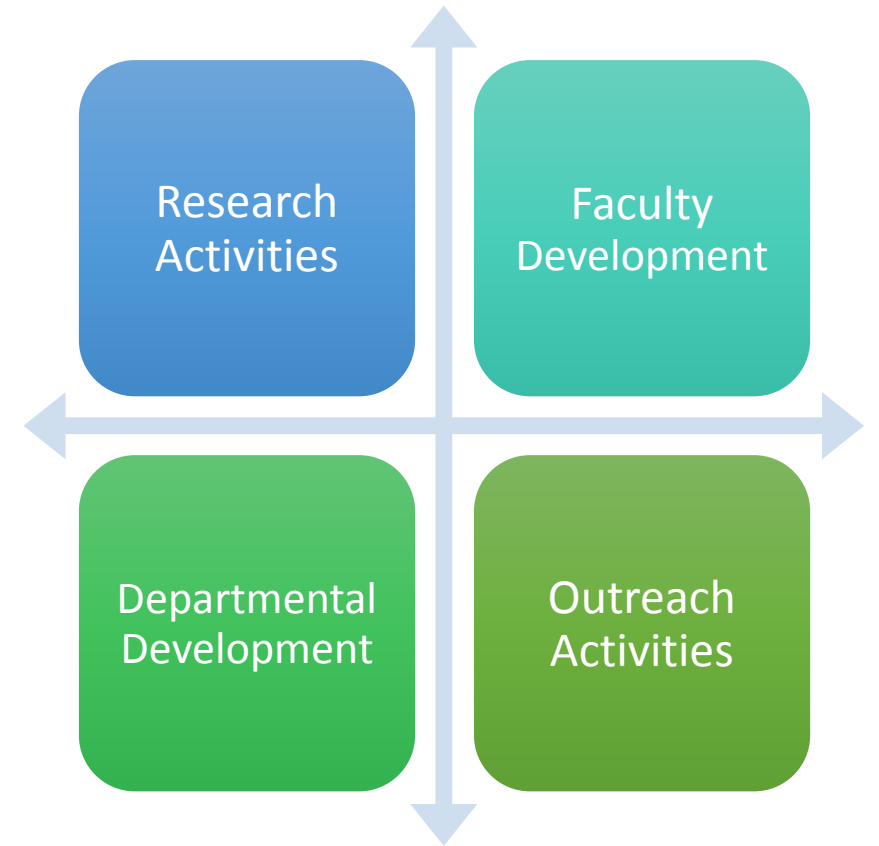- **Fiscal Year 2022:** BPC Project plans _required at time of submission_.

Guiding Principles for BPC Effort

BPC requires culture change in colleges/ universities, departments, classes, research groups, professional organizations & K-12

CISE research proposals include a *meaningful* plan to broaden participation in computing

Measurable progress towards diversifying the CISE Research Community

5 elements of a meaningful BPC plan

1. **Goal and Context:** Does the plan describe a goal and the data from your institution(s) or local community that justify that goal?

2. **Intended population(s):** Does the plan identify the characteristics of participants from an underrepresented group listed above, including school level (e.g., African American undergraduates or female high-school students)?

3. **Strategy:** Does the plan describe activities that address the stated goal(s) and intended population(s)?

4. **Measurement:** Is there a plan to measure the outcome(s) of the activities?

5. **PI Engagement:** Is there a clear role for each PI and co-PI? Does the plan describe how the PI is prepared (or will prepare or collaborate) to do the proposed work?
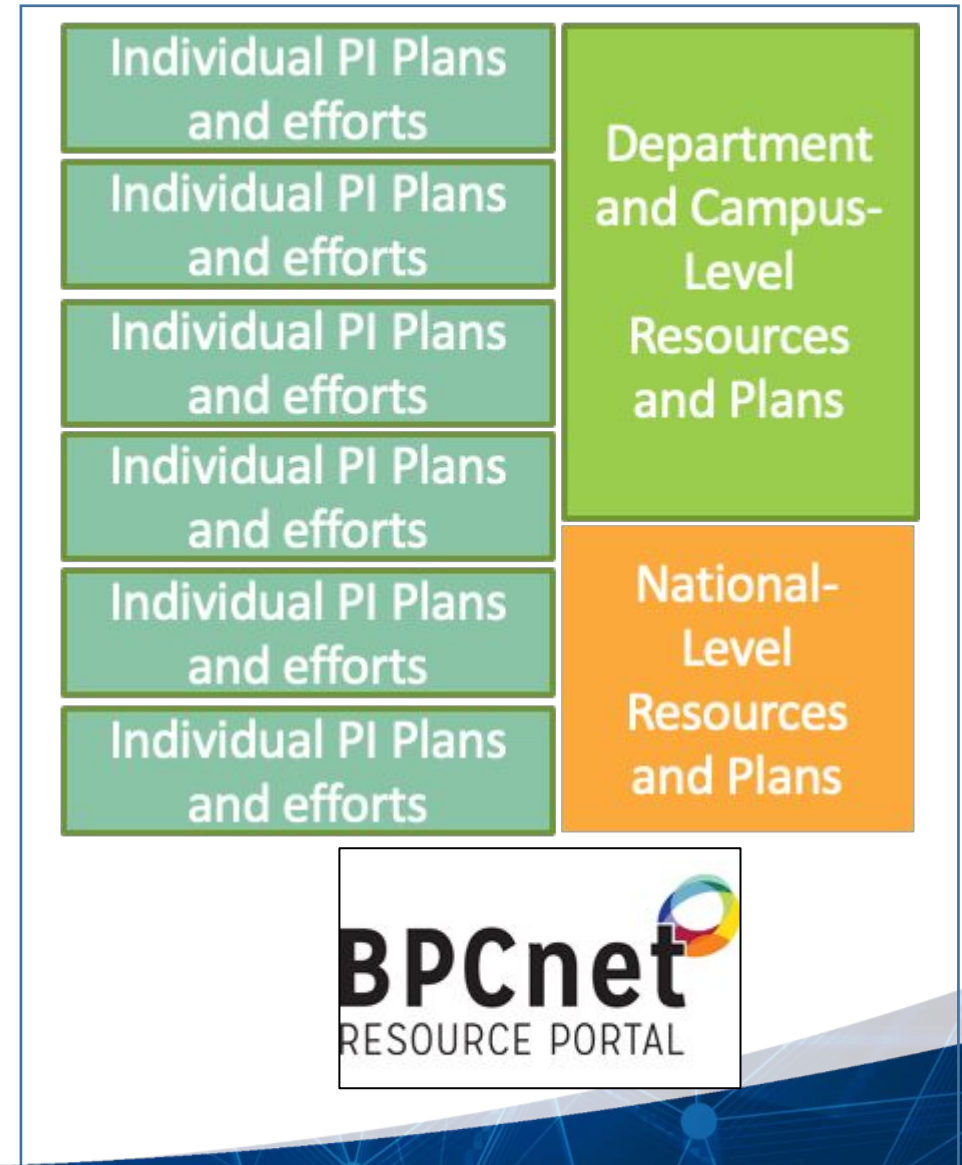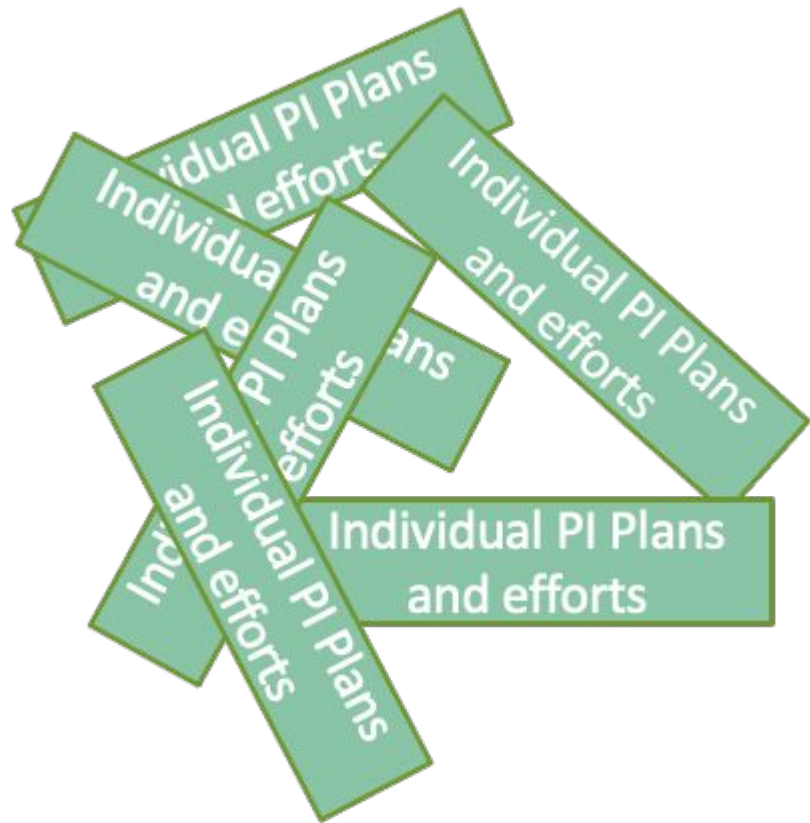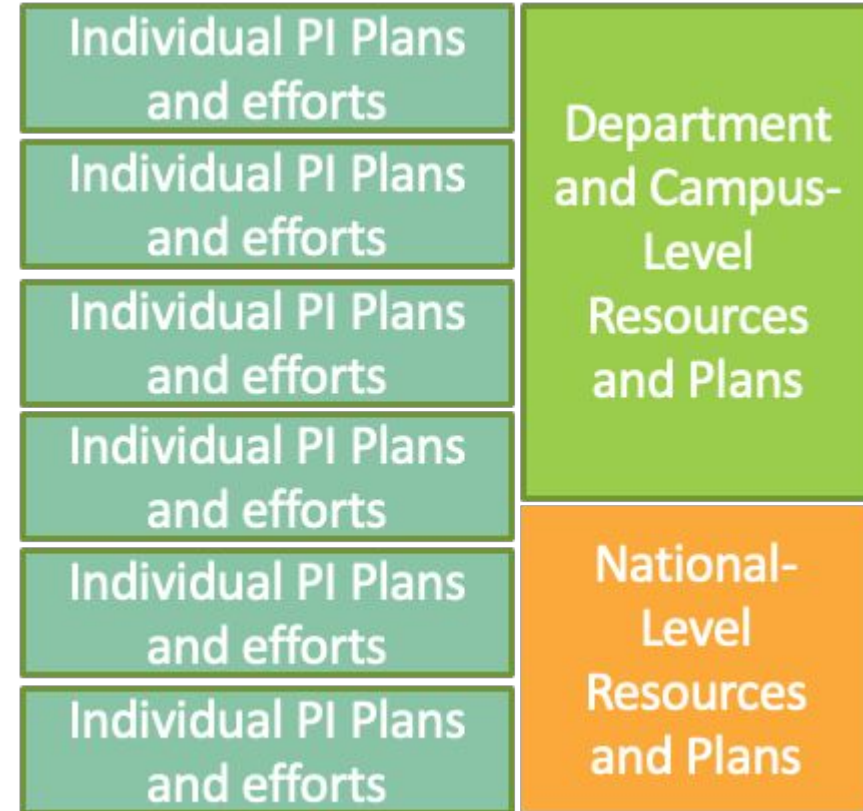
Challenges for BPC Plans

- A meaningful BPC plan should answer positively for all five elements *for all PIs and co-PIs*.

- The BPC Plan activities **do not** need to relate to the proposed research.

- Novelty in the BPC plan is not required. PIs can implement a best practice.

- Be realistic about your expertise and capacity

- Do not confuse *broader impacts* with *broadening participation*.
    - Proposed projects require both.
    - The proposed activities for the two can be related.
- Building on existing local and national resources?

Supporting the CISE Community in BPC Plans

BPCnet RESOURCE PORTAL provides resources for CISE PIs

- **Activity library**: A collection of existing BPC programs and activities.
- **BPC Alliances**: Coalitions supported by NSF.
- **Checklists and templates**: Resources for developing project BPC plans.
- **Departmental BPC plan verification**: Instructions on how to verify a departmental BPC plan.
- **Statistics and Data Hub**: A compilation of publicly available data on postsecondary degrees awarded and K-12 enrollment.
- **Undergraduate BPC Literature Database**: A collection of scholarly articles on BPC for college students.
- **Consulting, workshops and events**

Types of BPC Plans

Project BPC Plans
Describes **PI** actions
Submitted to NSF

Standalone Project BPC Plan

- One plan for the *entire* proposal
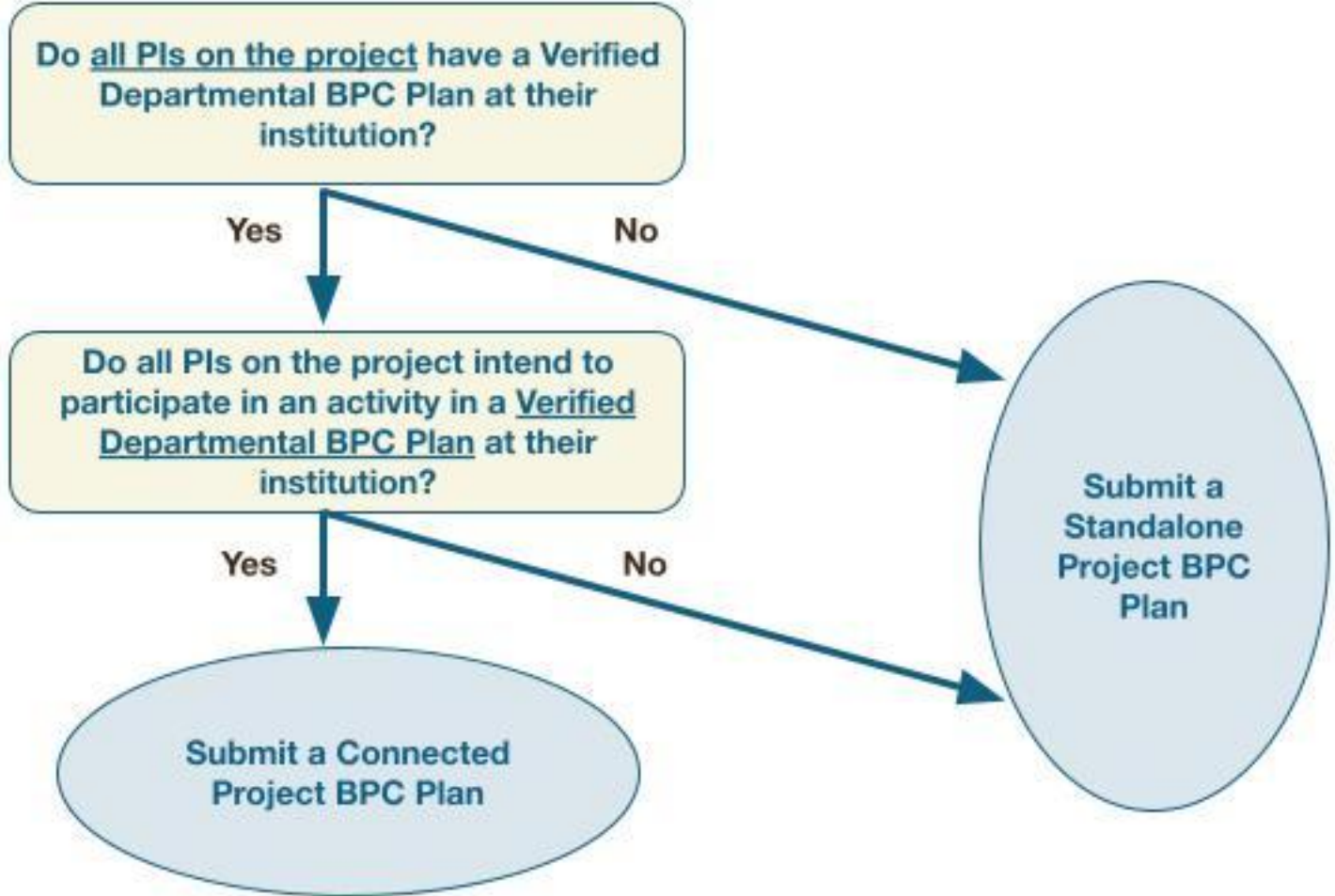- 3 pages total for a proposal

Connected Project BPC Plan

- One plan per each institution in a proposal
- For each institution:
  - 1 page PI plan +
  - 2 page Verified Departmental Plan

Departmental BPC Plan

- Describes **department** actions
- Verified by BPCnet.org
- 2 pages

Do **all PIs on the project** have a Verified Departmental BPC Plan at their institution?

Yes   No

Do all PIs on the project intend to participate in an activity in a <u>Verified Departmental BPC Plan</u> at their institution?

Yes   No

Submit a Connected Project BPC Plan

Submit a Standalone Project BPC Plan

BPCnet
RESOURCE PORTAL

Funding for BPC Activities

1. Request funding at award time for BPC activities
   - Costs for the BPC activities are separate from the stated budget limits

2. Request a **BPC Supplement (NSF 24-030)** to either
   - extend the reach of current BPC activities or
   - coordinate BPC activities within a department or similar unit.

3. Submit a **BPC Demonstration Project (NSF 21-571)** proposal to develop and evaluate a pilot of a BPC intervention

BPC Supplements

- Medium and larger awards for CISE Core Programs, SaTC, and CPS programs require a meaningful BPC plan and can request a BPC Supplement

- Supplements should either:
  - **Extend the reach** of current BPC activities that have some evidence of effectiveness to more participants or institutions;
    - **Example:** Partner with community colleges to offer summer research experiences and webinars in Quantum Information Science & Engineering
  - **Coordinate** or **institutionalize** BPC activities within a department or similar unit.
    - **Example:** Develop a departmental DEI/BPC plan with advice from NCWIT and evaluate initial interventions

Reporting Requirements

- Check the solicitation!

- Include in the appropriate sections of your annual report
  - A summary of what each PI and co-PI did, including any changes to the plan;
  - Numbers of events, participants, and participant demographics (if there are barriers to collecting this data, describe those limitations and provide the best estimates possible); and
  - A reflection (supported by data if available) on progress, any unexpected challenges or results, and anything planned.

Questions?

NSF CISE BPC Initiative

NSF BPC FAQ (22-125)

CISE Core Programs Solicitation (23-561)